Listing of Claims.

Please amend the claims as shown below. This listing of claims will replace all prior versions and listings of the claims in this application.

1-34. Canceled.

35. (Currently amended) A composition comprising:

(a) an RAR antagonist;

(b) a pharmaceutically acceptable carrier; and

(c) ~~a chondrogenic stimulator~~ an additional chondroinductive agent that promotes or stimulates cartilage formation and is selected from the group consisting of bone morphogenetic proteins, osteogenic proteins, cytokines, growth factors and mixtures thereof,

wherein said composition induces chondrogenesis leading to cartilage formation or chondrogenesis leading to cartilage formation that further mediates formation of new bone tissue in a vertebrate.

36. (Currently amended) The composition as claimed in claim 35, wherein said ~~chondrogenic stimulator~~ chondroinductive agent is a protein selected from the group consisting of a bone morphogenetic protein (BMP), an osteogenic protein (OPS), a cytokine and combinations thereof.

37. (Previously presented) The composition as claimed in claim 36, wherein said BMP is selected from the group consisting of BMP-2, BMP-4 and BMP-5.

38. (Previously presented) The composition as claimed in claim 37, wherein said osteogenic protein is OP-1.

39. (Previously presented) The composition of claim 35, wherein the RAR antagonist is present in an amount capable of stimulating chondrogenesis.

40. (Previously presented) The composition of claim 35, wherein said composition is provided as a solution, suspension, gel, matrix, cream, gel, film, paste, capsule, pill, tablet or encapsulated within liposomes.

41. (Previously presented) The composition of claim 35, wherein said composition is administered via intra-articular injection.

42. (Previously presented) The composition of claim 35, wherein said composition is provided within a biodegradable implantable matrix.

43. (Previously presented) A method for inducing chondrogenesis leading to cartilage formation or chondrogenesis leading to cartilage formation that further mediates formation of new bone tissue in a vertebrate, said method comprising administering a therapeutically effective amount of an RAR antagonist and a pharmaceutically acceptable carrier to said vertebrate.

44. (Previously presented) The method of claim 43, wherein said administration is local or systemic.

45. (Previously presented) The method of claim 43, wherein said administration is *in vitro* or *in vivo*.

46. (Previously presented) The method of claim 43, wherein said RAR antagonist antagonizes one or more of RARα, RARβ or RARγ.

47. (Previously presented) The method of claim 46, wherein said RAR antagonist antagonizes RARα.

48. (Previously presented) The method of claim 46, wherein said RAR antagonist antagonizes RARβ.

49. (Previously presented) The method of claim 46, wherein said RAR antagonist antagonizes RARγ.

50. (Previously presented) The method of claim 43, wherein said method comprises treatment of arthritis, abnormal cartilage formation and cartilage defects.

51. (Previously presented) A morphogenic device for implantation in a vertebrate, the device comprising:

(a) an implantable biocompatible carrier; and

(b) an RAR antagonist dispersed within or on said carrier.

52. (Previously presented) The device according to claim 51, wherein said carrier comprises demineralized bone, protein-extracted bone, particulate bone, allogenic bone, xenogenic bone or combinations thereof.

53. (Previously presented) The device according to claim 51, wherein said carrier is selected from the group consisting of semi-permeable polymer matrices, hydroxyapatite, collagen, tricalcium phosphate and copolymers of glycolid, lactic and butyric acid.

54. (Previously presented) The device according to claim 51, wherein said device comprises a biodegradable sponge.

55. (Previously presented) A method for producing a chondrocyte from a chondroprogenitor mesenchymal cell comprising contacting said chondroprogenitor mesenchymal cell with an RAR antagonist agent *in vitro*.

56. (Previously presented) A method for promoting *in vivo* integration of an implantable prosthetic device, into a target tissue of a vertebrate, the method comprising:

(a) providing on a surface of the prosthetic device a composition comprising RAR antagonist and a pharmaceutically acceptable carrier; and

(b) implanting the device in a vertebrate, at a site where the target tissue and surface of the prosthetic device are maintained at least partially in contact for a time sufficient for said composition to stimulate chondrogenesis to enhance tissue growth between the target tissue and the device.

57. (Previously presented) The method according to claim 56, wherein said target tissue is selected from the group consisting of cartilage, bone and combinations thereof.

58. (Previously presented) A method of treating a cartilage associated degenerative condition in a vertebrate comprising administering a pharmaceutical composition comprising an RAR antagonist.

59. (Previously presented) A method for promoting chondrogenesis at a site of skeletal surgery in a vertebrate, the method comprising delivering an RAR antagonist composition at the site of skeletal surgery wherein such delivery induces chondrogenesis leading to cartilage formation at said site or chondrogenesis leading to cartilage formation that further mediates formation of new bone tissue at said site.

60. (Previously presented) A method for repairing large segmental skeletal gaps and non-union fractures arising from trauma or surgery in vertebrates, the method comprising delivering an RAR antagonist composition at the site of the segmental skeletal gap or non-union fracture wherein such delivery promotes chondrogenesis leading to cartilage formation at said site or chondrogenesis leading to cartilage formation that further mediates formation of new bone tissue.

61. (Previously presented) A method for aiding the attachment of implantable prosthesis at cartilageous sites and for maintaining the long term stability of the prostheses in vertebrates, the method comprising coating selected regions of an implantable prosthesis with a RAR antagonist composition and implanting the coated prosthesis into a cartilageous site wherein such implantation promotes the formation of new cartilage tissue.

62. (Previously presented) A method of producing cartilage at a cartilage defect *in vivo*, said method comprising:

implanting into the defect a population of chrondrogenic cells which have been cultured in the presence of a RAR antagonist.

63. (Previously presented) A method for treating degenerative joint disease characterized by cartilage degeneration, said method comprising:

delivering a therapeutically effective amount of RAR antagonist to the site of disease to stimulate chondrogenesis at said site of disease.

64. (Previously presented) The method according to claim 63, wherein said RAR antagonist is delivered by intra-articular injection.

65. (Previously presented) The method according to claim 63, wherein said disease is arthritis.

Listing of Claims.

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